

Remarks/Arguments

In an Office Action dated December 16, 2008, claims 35-41 and 44-49 were rejected under § 102 over DeKoning (U.S. Patent No. 5,974,502); claims 12-18 and 29-34 were rejected under § 103 over DeKoning in view of Raman (U.S. Publ. No. 2003/0217119); claims 19 and 20 were rejected under § 103 over DeKoning in view of Raman and further in view of Ibrahim (U.S. Patent No. 6,880,062); claims 42 and 43 were rejected under § 103 over DeKoning in view of Ibrahim; claims 76-82 and 92-98 were rejected under § 103 over DeKoning in view of Brewer (U.S. Publ. No. 2003/0002503); claims 83, 99 and 100 were rejected under § 103 over DeKoning in view of Brewer and further in view of Ibrahim; claims 101-103, 105, 107-109, 111, 113-115 and 117 were rejected under § 103 over DeKoning in view of Brewer; and claims 104, 106, 110, 112, 116 and 118 were rejected under § 103 over DeKoning in view of Brewer and further in view of Raman. Applicants request reconsideration in view of the remarks below.

Section 102 Rejections

Claims 35-41 and 44-49 were rejected under § 102 over DeKoning. Applicants traverse the rejections.

Claims 35 and 44

Claims 34 and 44 require transmitting a write request for a subset of multiple blocks of data to multiple targets if the multiple targets do not satisfy the amount of data to be transferred by said multiple blocks of data.

Before commencing the arguments, Applicants note that previous Office Actions had not given the “if” clause in the preamble patentable weight. Applicants argued that the “if” clause must be considered. Given that there are no statements in the present Office Action about not giving patentable weight to the preamble “if” clause, Applicants take this as an admission that the “if” clause will be considered.

As stated previously, the “if” clause is a condition precedent to even performing the transmitting steps of claims 35 and 44. Reviewing then the “if” clause, it requires determining if multiple targets do not satisfy the amount of data to be transferred by the multiple blocks of data. Applicants submit that DeKoning does not teach or suggest this determination.

DeKoning relates to determining the size of an I/O request to a RAID system and breaking it into pieces if it exceeds a predetermined size. DeKoning only compares the block size of the I/O request to a predetermined limit. See col. 6, lines 28-39. DeKoning does not determine if multiple targets cannot satisfy the block size of the request. The predetermined limit may be fixed or may be tunable. See col. 7, line 52-col. 8, line 33. None of the parameters used to develop the fixed or tuned values are whether the multiple targets can satisfy the amount of data to be transferred. See col. 7, lines 55-57 and col. 8, lines 23-26. As this determination of whether the multiple targets can satisfy the amount of data to be transferred is the function of the “if” clause, and therefore a required operation of the claim, DeKoning fails to teach or suggest required claim elements. DeKoning may break I/O requests into smaller subsets, but it fails to do it for the condition required in the claim. As a result, DeKoning does not teach or suggest claims 35 and 44.

Applicants therefore submit that claims 35 and 44 are allowable.

Claims 39 and 48

Claims 39 and 48 were rejected under exactly the same grounds as claims 39 and 44. Therefore the claims are allowable for the reasons stated above. Further, the relationships between claims 35 and 44 and 39 and 48 must be considered. Claims 39 and 44 require submitting a write request for a subset of the multiple blocks. Claims 39 and 48 require sending a write request for a further subset of the blocks of previous write requests, either that of claims 35 and 44 or a prior request of claims 39 and 48. DeKoning simply breaks up the smaller requests into individual drive sizes based on the RAID configuration. This secondary splitting is also not based on whether the targets can satisfy the amount of a data request, but is just based on the RAID type. Therefore DeKoning does not teach this second level of transmitting a write request for a further subset. Applicants submit that claims 39 and 48 are allowable.

Section 103 Rejections

Claims 12-18 and 29-34

Claims 12-18 and 29-34 were rejected under § 103 over DeKoning in view of Raman. Applicants traverse the rejections.

Claims 12 and 29

Claims 12 and 29 are similar to claims 35 and 44, except that instead of transmitting a subset, they transmit half of the multiple blocks. Claims 12 and 29 were rejected under similar grounds to claims 35 and 44, with Raman added to show one half size transmissions. The arguments of claims 35 and 44 apply equally to claims 12 and 29. As a result Applicants submit that claims 12 and 29 are allowable.

Claims 16 and 33

Claims 16 and 33 are similar to claims 39 and 48, except that they transmit half of the multiple blocks rather than a further subset. The arguments of claims 39 and 48 apply equally so that claims 16 and 33 are allowable.

Claims 76-82 and 92-98

Claims 76-82 and 92-98 were rejected under § 103 over DeKoning in view of Brewer. Applicants traverse the rejection.

Claims 76 and 92

Claims 76 and 92 both require a mirroring device that operates according to claim 35. As a result, the arguments relating to claim 35 apply equally so that claims 76 and 92 are allowable.

Claims 80 and 96

Claims 80 and 96 require the mirroring device to operate according to claim 39. Therefore the arguments of claim 39 apply, so claims 80 and 96 are allowable.

Claims 101-103, 105, 107-109, 111, 113-115 and 117

Claims 101-103, 105, 107-109, 111, 113-115 and 117 were rejected under § 103 over DeKoning in view of Brewer. Applicants traverse the rejections.

Claims 101, 107 and 113

Each of these claims requires performing the operations of claim 35 and were rejected identically to claim 35 for those aspects. Thus the arguments of claim 35 apply and claims 101, 107 and 113 are allowable.

Claims 102, 108 and 114

Claims 102, 108 and 114 include the further operations of claim 39. As a result, the arguments of claim 39 apply equally. Therefore claims 102, 108 and 114 are allowable.

Claims 103, 105, 109, 111, 115 and 117

Claims 103, 105, 109, 111, 115 and 117 require transmitting abort write requests before transmitting the write requests. DeKoning col. 3, lines 13-20, the citation used to support the rejection, does not discuss an abort write request as required by the claims. Therefore the citation does not support the rejections so that the rejections should be withdrawn.

Conclusion

Based on the above remarks Applicants respectfully submit that all of the present claims are allowable. Reconsideration is respectfully requested.

Respectfully submitted,

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